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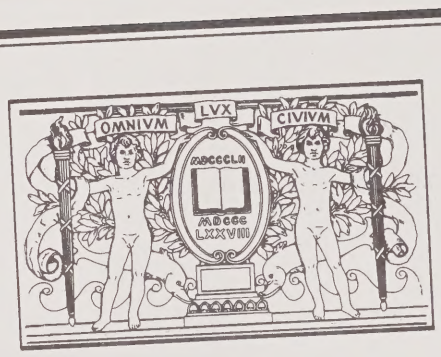

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BOSTON EMPLOYMENT TRENDS AND PROJECTIONS BY INDUSTRY

emp. 91-361

Employment in Boston and its Private Office Space, 1976-1985 and Projections to 1990, 1995 and 2000

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(September 26, 1986)
(November 12, 1986)
December 12, 1986

Appendix bound separately.

SUMMARY

Employment in the City of Boston expanded by 83,000 between 1976 and 1985. By the year 2000, workplaces in the City could employ an additional 152,000 workers, an average increase of 10,000 per year over 15 years. The industry groups which have grown, and are expected to continue to grow, the fastest are business, professional and other services and finance, insurance and real estate.

Businesses in private office buildings have played a leading role in employment growth in Boston. In fact, employers in private office space added 52 percent of the net new jobs in Boston from 1976 to 1985. Over the next fifteen years, office-based employers will supply two of every three net new jobs in Boston. Office-based employment will rise from 32 percent of all jobs in 1985 to 39 percent in 2000.

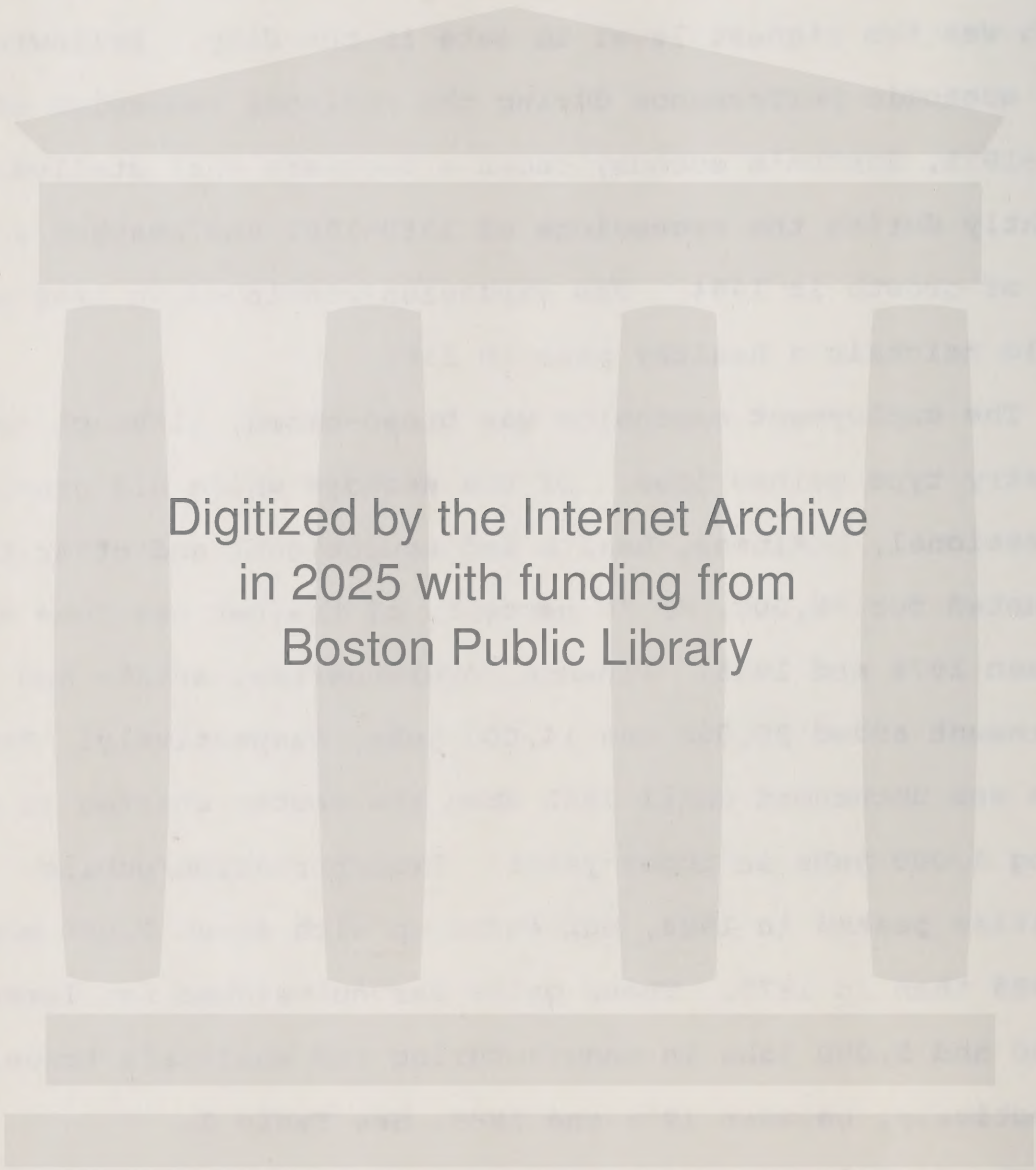
This report presents estimates of employment in Boston and its private office buildings for selected the years 1976, 1980 through 1985 and projections of employment for 1990, 1995 and 2000. In addition, estimates and projections of office-based employment in Boston and the Boston Metropolitan Area are provided to show Boston's past and future shares of regional office-based employment. Due to strong demand for office space in Boston and the city's comparative market advantages, Boston is likely to capture an increasing share of the Metropolitan Area's growth in office-based employment.

Employment by Industry, 1976-1985

Employment by place of work in Boston increased by 83,000 from 1976 to 1985. Total employment reached 594,000 in 1985 which was the highest level to date in the City. Following a poor economic performance during the national recession of 1974-1975, Boston's economy began a recovery that stalled only slightly during the recessions of 1980-1982 and reached a peak rate of growth in 1984. The expansion continued in 1985 and should maintain a healthy pace in 1986.

The employment expansion was broad-based, although not every industry type gained jobs. Of the sectors which did grow, professional, business, health and educational and other services accounted for 58,000, or 70 percent, of the net new jobs added between 1976 and 1985. Finance/insurance/real estate and government added 20,000 and 14,000 jobs, respectively. Retail trade was unchanged until 1982 when the sector started to grow, adding 6,000 jobs in three years. Transportation/public utilities peaked in 1984, but ended up with about 2,000 more jobs in 1985 than in 1976. These gains far outweighed net losses of 11,000 and 5,000 jobs in manufacturing and wholesale trade, respectively, between 1976 and 1985. See Table 1.

The distribution of jobs among sectors has changed substantially since 1976 due to differential rates of growth by sector. Services and finance/insurance/real estate together accounted for 52 percent of total employment in 1985, compared to 46 percent in 1976. Manufacturing and wholesale trade made up 17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percent of total employment in 1976, but only 11 percent in 1985. Construction's role in place-of-work employment was quite small despite a building boom in Boston that supported, after 1980, about 12,000 full-time-equivalent construction jobs per year at Boston sites. Apparently, given the low-rise, equipment-intensive nature of land use for construction companies, many firms chose to locate their headquarters outside of Boston. See Table 2. Reliable data on employment by construction site are not available.

Three of every ten employees in Boston worked in privately-leased office space in 1985. Private office space, located in the downtown area and the Back Bay, supported 188,000 employees in 1985, up from 144,000 in 1976. Business and professional services accounted for 70,000 jobs, or 37 percent of all office employment, and finance/insurance/real estate made up 32 percent of the total. Public utilities, government agencies in private space, and other services employed most of the remaining office workers. See Tables 3, 3a and 4.

Projections of Employment, 1985-2000

By the year 2000, workplaces in Boston could support an additional 152,000 employees. Employment is projected to grow from 594,000 in 1985 to 746,000 in 2000. That represents an increase of about 10,000 jobs per year, or a 26 percent gain over the period. Services will lead the expansion in magnitude and rate: 110,000 additional jobs or 49 percent above the 1985

level. Business and professional services will be the fastest growing service industry types. Medical services, starting from a large base, will add 22,000 jobs even though its rate of growth will be slower than its rate during 1976-1985. Finance/insurance/real estate will add 23,000 jobs by the year 2000, and retail trade will expand by another 9,000 jobs. Little growth is expected in wholesale trade, and manufacturing will likely lose 2,000 jobs over the period. See Tables 5 and 6.

Differential rates of growth by industry will further change the composition of employment in Boston. Services and finance/insurance/real estate, combined, will account for 60 percent of all jobs in the year 2000. The share of manufacturing, construction, and trade employment will continue to diminish gradually. See Table 7.

Projections for employment in office space, indicate that the number of office jobs will reach 288,000 by the year 2000, or 39 percent of all jobs in Boston workplaces. That level of employment would require about 60 million square feet of office space, compared to the 39 million square feet that was occupied in 1985. See Tables 8 and 8a. Business and professional services and finance/insurance/real estate will lead the growth in office employment and account for increasingly larger shares of total office employment. See Tables 9 and 10.

Boston is likely to continue to account for 4 of every 10 office employees in the Boston Metropolitan Area. Boston will likely capture 42 percent of the net new office jobs from 1985-2000, compared to 30 percent in the decade prior to 1985,

due to the city's market advantages attributable to its core of financial and services establishments, ties to other major national and international centers and orderly construction of office space. See Tables 11-14.

Data and Method

The estimates of employment by industry for the years 1976 through 1985 rely on several sources of data. The Bureau of Economic Analysis provided employment by major industry group for Suffolk County for the years 1976-1984. This is the most comprehensive employment base as it includes self-employed workers, all service jobs and all public employees including those in the military. The Bureau revised its employment series in 1986. The new series no longer has a separate category for proprietors (they are allocated to industry types) and the totals are slightly higher for a given year in comparison to the old series. Consequently, previous BRA estimates of Boston employment are out of date. In particular, this report supersedes the Research Department publication number 149, "Boston Employment ..." (April 1985).

The most detailed and up-to-date source of employment data is the ES-202 series from the Massachusetts Division of Employment Security (MDES), 1980-1985. The Bureau of Economic Analysis (BEA) bases its employment series on the ES-202 series. The ES-202, 2-digit Standard Industrial Classification (SIC) composition for Suffolk County was applied to the Bureau of Economic Analysis (BEA) Suffolk County employment base. That new

"BEA" 2-digit Suffolk County base was adjusted to represent Boston by multiplying each 2-digit industry by the fraction: (Boston ES-202 employment divided by Suffolk ES-202 employment).

However, the ES-202 series is not available in a comparable format prior to 1980. Consequently, the U.S. Census Bureau's County Business Patterns for Suffolk County were used for 2-digit SIC detail instead of the ES-202 series for the years 1976-1979. The Boston fraction of Suffolk County employment by 2-digit SIC in the 1980 ES-202 series was multiplied times the Suffolk County base for 1976 to derive the Boston estimates for 1976.

Projections for 1990, 1995 and 2000 were based on Boston Metropolitan Area employment projections from the Bureau of Economic Analysis and the National Planning Association. State projections from the Massachusetts Division of Employment Security and forecasts from the Boston Regional Model, produced by Regional Economic Models, Inc. for the BRA, were also used to select growth rates by industry for each five-year period. Knowledge of large development projects in Boston and judgments about local sectors rounded out the method. More detail is presented in the appendix to this report.

The method used for estimating office employment for Tables 3 and 8 is described in Tables 3a and 8a. In brief, the BRA's office industry survey in 1978 provided ratios of office employment to total employment for each major industry type. Those ratios, with slight adjustments over time to reflect changing mixes of business types within industries, were applied to estimates of total employment by industry for past and future

years. Although the office employment factors rely on informed judgment to a large extent, the resulting estimates of office-based employment are consistent with tallies of actual occupied office space, assuming between 204 and 220 square feet of office space per employee.

TABLE 1: EMPLOYMENT * BY INDUSTRY, CITY OF BOSTON, 1976-1985

INDUSTRY	THOUSANDS OF EMPLOYEES							CHANGE 1976-1985	
	1976	1980	1981	1982	1983	1984	1985	NUMBER	PERCENT
Agri/Mining	1.0	0.9	1.0	1.1	1.2	1.3	1.3	0.3	23.2
Construction	14.7	11.4	11.7	11.9	12.0	12.8	13.7	-1.0	-6.9
Manufacturing	53.8	52.3	51.1	50.0	47.4	47.3	42.5	-11.3	-20.9
Transportation/Pub.Util.	34.8	37.5	37.9	36.7	36.9	39.1	36.6	1.8	5.2
Wholesale Trade	31.2	28.5	28.4	26.3	27.2	28.9	25.8	-5.4	-17.4
Retail Trade	57.9	58.6	58.4	57.8	59.6	63.1	63.7	5.8	9.9
Finance/Ins./Real Estate	64.7	72.9	75.3	78.5	79.5	81.7	85.1	20.4	31.6
Services	168.3	201.6	203.2	206.3	213.2	220.1	225.8	57.5	34.2
Hotel	4.9	6.4	6.8	7.6	8.6	9.3	10.2	5.3	108.9
Medical	56.6	64.1	63.7	64.3	64.9	65.9	65.9	9.3	16.2
Educational	23.5	25.8	25.9	25.9	27.3	27.4	27.7	4.2	17.9
Cultural	5.1	6.1	5.6	5.7	6.1	6.1	6.3	1.2	24.0
Social/Nonprofit	18.2	19.6	19.7	19.5	19.9	20.8	20.5	2.3	12.7
Business	30.4	37.7	37.9	38.2	40.6	43.7	47.2	16.8	55.3
Professional	22.4	31.6	33.5	34.9	35.3	35.7	36.3	13.9	62.2
Personal & Repair	7.3	10.2	10.1	10.2	10.5	11.2	11.8	4.5	62.6
Government	84.8	97.2	94.7	89.4	92.1	94.2	99.2	14.4	17.0
Total Employment	511.2	560.9	561.7	558.0	569.1	588.5	593.7	82.5	16.1

* All full- and part-time employees, including self-employed and military personnel.

Sources: Massachusetts Division of Employment Security;
U.S. Department of Commerce, Bureau of Economic Analysis;
County Business Patterns, Massachusetts.

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TABLE 2: COMPOSITION OF EMPLOYMENT BY INDUSTRY
CITY OF BOSTON, 1976-1985

EMPLOYMENT IN PERCENT

INDUSTRY	1976	1980	1981	1982	1983	1984	1985
Agri/Mining	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Construction	2.9	2.0	2.1	2.1	2.1	2.2	2.3
Manufacturing	10.5	9.3	9.1	9.0	8.3	8.0	7.2
Transportation/Pub.Util.	6.8	6.7	6.7	6.6	6.5	6.6	6.2
Wholesale Trade	6.1	5.1	5.1	4.7	4.8	4.9	4.3
Retail Trade	11.3	10.4	10.4	10.4	10.5	10.7	10.7
Finance/Ins./Real Estate	12.7	13.0	13.4	14.1	14.0	13.9	14.3
Services	32.9	35.9	36.2	37.0	37.5	37.4	38.0
Hotel	1.0	1.1	1.2	1.4	1.5	1.6	1.7
Medical	11.1	11.4	11.3	11.5	11.4	11.2	11.1
Educational	4.6	4.6	4.6	4.6	4.8	4.7	4.7
Cultural	1.0	1.1	1.0	1.0	1.1	1.0	1.1
Social/Nonprofit	3.6	3.5	3.5	3.5	3.5	3.5	3.4
Business	5.9	6.7	6.8	6.8	7.1	7.4	7.9
Professional	4.4	5.6	6.0	6.3	6.2	6.1	6.1
Personal & Repair	1.4	1.8	1.8	1.8	1.9	1.9	2.0
Government	16.6	17.3	16.9	16.0	16.2	16.0	16.7
Total Employment	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Massachusetts Division of Employment Security;
U.S. Department of Commerce, Bureau of Economic Analysis;
County Business Patterns, Massachusetts.

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TABLE 3: EMPLOYEES IN PRIVATE OFFICE SPACE, CITY OF BOSTON, 1976-1985

INDUSTRY	THOUSANDS OF EMPLOYEES						
	1976	1980	1981	1982	1983	1984	1985
Agri/Mining	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Construction	1.8	1.4	1.4	1.5	1.5	1.6	1.7
Manufacturing	5.4	5.8	5.6	6.0	5.7	6.1	5.5
Transportation/P.U.	12.5	13.6	13.8	13.3	13.4	14.3	13.4
Wholesale Trade	1.6	1.4	1.4	1.3	1.4	1.4	1.3
Retail Trade	2.9	2.9	2.9	2.9	3.0	3.2	3.2
Finance/Ins./Real Est.	44.0	49.9	51.6	54.2	55.0	56.8	60.4
Services	60.3	75.8	77.2	79.2	81.9	84.5	87.6
Business	24.0	29.8	29.9	30.2	32.1	34.5	37.3
Professional	20.2	28.4	30.2	31.4	31.8	32.1	32.7
Other Services	16.1	17.6	17.1	17.6	18.0	17.9	17.7
Government	15.9	16.2	15.6	14.3	13.4	13.7	14.4
Total Employment	144.4	167.2	169.7	172.8	175.3	181.8	187.7
Occupied Office Space in Millions of Square Feet:							
Occupied Office Space *	30.0	33.6	35.0	36.2	35.7	37.8	38.6
Square Feet Per Employee	208	201	206	209	204	208	206
Occupied Office Space @ 220 SF/EMP	31.8	36.8	37.3	38.0	38.6	40.0	41.3

* Estimated by BRA, August 1986.

Sources: Massachusetts Division of Employment Security;
U.S. Department of Commerce, Bureau of Economic Analysis;
County Business Patterns, Massachusetts.

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TABLE 3a: OFFICE EMPLOYMENT FACTORS BY INDUSTRY, CITY OF BOSTON, 1976-1985

INDUSTRY	FRACTION OF ALL EMPLOYEES *						
	1976	1980	1981	1982	1983	1984	1985
Agri/Mining	0.130	0.130	0.130	0.130	0.130	0.130	0.130
Construction	0.120	0.122	0.122	0.122	0.122	0.124	0.126
Manufacturing	0.100	0.110	0.110	0.120	0.120	0.130	0.130
Transportation/P.U.	0.360	0.363	0.363	0.363	0.363	0.366	0.366
Wholesale Trade	0.050	0.050	0.050	0.050	0.050	0.050	0.050
Retail Trade	0.050	0.050	0.050	0.050	0.050	0.050	0.050
Finance/Ins./Real Est.	0.680	0.685	0.685	0.690	0.692	0.695	0.710
Services	0.358	0.376	0.380	0.384	0.384	0.384	0.388
Business	0.790	0.790	0.790	0.790	0.790	0.790	0.790
Professional	0.900	0.900	0.900	0.900	0.900	0.900	0.900
Other Services	0.139	0.133	0.129	0.132	0.132	0.127	0.124
Government	0.188	0.167	0.165	0.160	0.145	0.145	0.145

* These factors represent the proportion of the employment in each industry that is located in competitive office space. For example, in 1976, .120 or 12 percent of the construction employees were working in competitive office space. In the government sector in 1976, 18.8 percent of the employees were in private office space, which does not include public office buildings. The factors for 1976 are based on the BRA's 1978 Office Industry Survey with the exception of the service subsectors. The factors were assumed to increase slightly over time due to differential growth within each subsector among more-office-related business types and less-office-related types.

Sources: Massachusetts Division of Employment Security;
U.S. Department of Commerce, Bureau of Economic Analysis;
County Business Patterns, Massachusetts.

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TABLE 4: COMPOSITION OF EMPLOYMENT IN PRIVATE OFFICE SPACE BY INDUSTRY, CITY OF BOSTON, 1976-1985

EMPLOYMENT IN PERCENT

INDUSTRY	1976	1980	1981	1982	1983	1984	1985
Agri/Mining	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Construction	1.2	0.8	0.8	0.8	0.8	0.9	0.9
Manufacturing	3.7	3.4	3.3	3.5	3.2	3.4	2.9
Transportation/Pub.Util.	8.7	8.1	8.1	7.7	7.6	7.9	7.1
Wholesale Trade	1.1	0.9	0.8	0.8	0.8	0.8	0.7
Retail Trade	2.0	1.8	1.7	1.7	1.7	1.7	1.7
Finance/Ins./Real Estate	30.5	29.9	30.4	31.3	31.4	31.2	32.2
Services	41.7	45.3	45.5	45.8	46.7	46.5	46.7
Business	16.6	17.8	17.7	17.5	18.3	19.0	19.9
Professional	14.0	17.0	17.8	18.2	18.1	17.7	17.4
Other Services	11.1	10.5	10.0	10.2	10.3	9.8	9.4
Government	11.0	9.7	9.2	8.3	7.6	7.5	7.7
Total Employment	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: See Table 3.

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TABLE 5: EMPLOYMENT IN THE CITY OF BOSTON BY INDUSTRY
1976, 1985 AND PROJECTIONS TO 1990, 1995 AND 2000

THOUSANDS OF EMPLOYEES

INDUSTRY	1976	1985	1990	1995	2000
Agri/Mining	1.0	1.3	1.3	1.3	1.3
Construction	14.7	13.7	14.5	15.1	15.4
Manufacturing	53.8	42.5	41.7	41.0	40.3
Transportation/P.U.	34.8	36.6	37.3	39.0	40.5
Wholesale Trade	31.2	25.8	26.0	26.1	26.2
Retail Trade	57.9	63.7	67.5	70.4	72.7
Finance/Ins./Real Est.	64.7	85.1	95.3	102.0	108.1
Banking	14.0	22.8	24.6	26.2	27.8
Other Credit & Securities	7.2	13.3	16.5	19.3	21.0
Insurance	35.8	33.7	37.0	38.4	39.6
Real Estate & Other Investment	7.1	14.2	15.8	17.0	18.2
Services	168.3	225.9	266.7	301.8	336.1
Hotel	4.9	10.2	11.2	12.1	12.9
Medical	56.7	65.9	75.7	83.3	88.3
Educational	23.5	27.7	29.9	30.8	31.9
Cultural	5.1	6.3	7.0	7.3	7.6
Social/Nonprofit	18.2	20.5	24.1	25.7	27.5
Business	30.4	47.2	60.2	73.8	87.8
Professional	22.4	36.3	45.0	53.9	63.5
Personal & Repair	7.3	11.8	13.6	15.1	16.6
Government	84.8	99.2	102.1	104.2	105.4
Total Employment	511.2	593.6	652.4	700.9	746.1

Sources: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Information System, 1976-1984, Projections 1983-1995;
Bureau of the Census, County Business Patterns 1976-1984.
National Planning Association, Projections 1985-2000.
Massachusetts Division of Employment Security, ES-202 Series 1980-1985 and Massachusetts Industrial Employment Projected Changes 1984-1995, May 1986.
Regional Economic Models, Inc., Boston Regional Model, 1976-1995.

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TABLE 6: CHANGES IN EMPLOYMENT IN THE CITY OF BOSTON BY INDUSTRY
1976-1985 AND PROJECTIONS 1985-2000

	CHANGE IN EMPLOYMENT IN THOUSANDS									
	1976-1985		1985-1990		1990-1995		1995-2000		1985-2000	
INDUSTRY	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Agri/Mining	0.2	23	0.0	1	0.0	0	0.0	0	0.0	2
Construction	-1.0	(7)	0.8	6	0.6	4	0.3	2	1.7	12
Manufacturing	-11.2	(21)	-0.9	(2)	-0.7	(2)	-0.7	(2)	-2.2	(5)
Transportation/Pub.Util.	1.8	5	0.7	2	1.6	4	1.6	4	3.9	11
Wholesale Trade	-5.4	(17)	0.2	1	0.1	0	0.1	0	0.4	2
Retail Trade	5.8	10	3.8	6	2.9	4	2.3	3	9.1	14
Finance/Ins./Real Estate	20.4	32	10.2	12	6.7	7	6.1	6	23.0	27
Banking	8.8	63	1.8	8	1.6	7	1.6	6	5.0	22
Other Credit & Securiti	6.0	84	3.2	24	2.8	17	1.8	9	7.7	58
Insurance	-2.1	(6)	3.4	10	1.4	4	1.1	3	5.9	18
Real Estate & Other Inv	7.2	101	1.6	11	1.2	7	1.2	7	4.0	28
Services	57.5	34	40.8	18	35.2	13	34.3	11	110.3	49
Hotel	5.3	109	1.0	10	0.8	7	0.8	7	2.6	25
Medical	9.2	16	9.8	15	7.6	10	5.0	6	22.5	34
Educational	4.2	18	2.2	8	0.9	3	1.1	4	4.2	15
Cultural	1.2	24	0.7	12	0.3	4	0.3	5	1.3	21
Social/Nonprofit	2.3	13	3.6	18	1.6	7	1.8	7	7.0	34
Business	16.8	55	13.0	27	13.6	23	14.1	19	40.7	86
Professional	13.9	62	8.7	24	8.8	20	9.7	18	27.2	75
Personal & Repair	4.5	63	1.8	15	1.5	11	1.5	10	4.8	40
Government	14.4	17	3.0	3	2.0	2	1.3	1	6.3	6
Total Employment	82.5	16	58.8	10	48.5	7	45.3	6	152.5	26

Sources: See Table 5.

TABLE 7: COMPOSITION OF EMPLOYMENT IN THE CITY OF BOSTON BY INDUSTRY
1976, 1985 AND PROJECTIONS TO 1990, 1995 AND 2000

	EMPLOYMENT IN PERCENT				
INDUSTRY	1976	1985	1990	1995	2000
Agri/Mining	0.2	0.2	0.2	0.2	0.2
Construction	2.9	2.3	2.2	2.1	2.1
Manufacturing	10.5	7.2	6.4	5.8	5.4
Transportation/Pub.Util.	6.8	6.2	5.7	5.6	5.4
Wholesale Trade	6.1	4.3	4.0	3.7	3.5
Retail Trade	11.3	10.7	10.3	10.0	9.7
Finance/Ins./Real Estate	12.7	14.3	14.6	14.6	14.5
Banking	2.7	3.8	3.8	3.7	3.7
Other Credit & Securities	1.4	2.2	2.5	2.7	2.8
Insurance	7.0	5.7	5.7	5.5	5.3
Real Estate & Other Investment	1.4	2.4	2.4	2.4	2.4
Services	32.9	38.0	40.9	43.1	45.0
Hotel	1.0	1.7	1.7	1.7	1.7
Medical	11.1	11.1	11.6	11.9	11.8
Educational	4.6	4.7	4.6	4.4	4.3
Cultural	1.0	1.1	1.1	1.0	1.0
Social/Nonprofit	3.6	3.4	3.7	3.7	3.7
Business	5.9	7.9	9.2	10.5	11.8
Professional	4.4	6.1	6.9	7.7	8.5
Personal & Repair	1.4	2.0	2.1	2.2	2.2
Government	16.6	16.7	15.7	14.9	14.1
Total Employment	100.0	100.0	100.0	100.0	100.0

Sources: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Information System 1976-1984, Projections 1983-1995;
Bureau of the Census, County Business Patterns 1976-1984.
National Planning Association, Projections 1985-2000.
Massachusetts Division of Employment Security, ES-202 Series 1980-1985,
Massachusetts Industrial Employment Projected Changes 1984-1995, May 1986.
Regional Economic Models, Inc., Boston Regional Model, 1976-1995.

JPB 09.11.86

TABLE 8. EMPLOYMENT IN PRIVATE OFFICE SPACE IN THE CITY OF BOSTON BY INDUSTRY, 1976, 1985 AND PROJECTIONS TO 1990, 1995 AND 2000

INDUSTRY	THOUSANDS OF EMPLOYEES				
	1976	1985	1990	1995	2000
Agri/Mining	0.1	0.2	0.2	0.2	0.2
Construction	1.8	1.7	1.9	2.1	2.1
Manufacturing	5.4	5.5	5.8	6.1	6.5
Transportation/P.U.	12.5	13.4	13.8	15.2	16.2
Wholesale Trade	1.6	1.3	1.3	1.3	1.3
Retail Trade	2.9	3.2	3.4	3.5	3.6
Finance/Ins./Real Est.	44.0	60.4	69.6	76.5	83.2
Services	60.3	87.6	109.9	128.3	156.7
Business	24.0	37.3	48.1	59.4	71.2
Professional	20.2	32.7	40.8	49.0	57.8
Other Services	16.1	17.7	21.0	19.9	27.7
Government	15.9	14.4	15.3	16.7	17.9
Total	144.4	187.7	221.2	249.9	287.8
Percent of All Employees	28	32	34	36	39
Occupied Office Space Required in Millions of Square Feet: @ 220 Square Feet Per Employee	31.8	41.3	48.7	55.0	63.3

Sources: See projections on Table 5;
Boston Redevelopment Authority, Office Industry Survey, 1978;
Boston Redevelopment Authority, Research Department.

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TABLE 8a: OFFICE EMPLOYMENT FACTORS IN THE CITY OF BOSTON BY INDUSTRY
1976, 1985 AND PROJECTIONS TO 1990, 1995 AND 2000

INDUSTRY	FRACTION OF ALL EMPLOYEES IN PRIVATE OFFICE SPACE				
	1976	1985	1990	1995	2000
Agri/Mining	0.130	0.130	0.140	0.140	0.140
Construction	0.120	0.126	0.130	0.140	0.140
Manufacturing	0.100	0.130	0.140	0.150	0.160
Transportation/P.U.	0.360	0.366	0.370	0.390	0.400
Wholesale Trade	0.050	0.050	0.050	0.050	0.050
Retail Trade	0.050	0.050	0.050	0.050	0.050
Finance/Ins./Real Est.	0.680	0.710	0.730	0.750	0.770
Services	0.358	0.388	0.412	0.197	0.466
Business	0.790	0.790	0.800	0.805	0.810
Professional	0.900	0.900	0.905	0.910	0.910
Other Services	0.139	0.124	0.130	0.114	0.150
Government	0.188	0.145	0.150	0.160	0.170

Source: See Table 3a; as further explanation, the factors for Other Services are a composite of factors that were assumed to range from .03 to .08 for personal, health, repair, amusement, and educational services and to be about .55 for social/non-profit services. The remainder of services employment was allocated to business and professional services, with lesser factors for business services due to the inclusion of protective, security and building services in that category. The factors were assumed to increase slightly over time due to differential growth within each subsector among more office-related business types and less office-related types. For example, office-related employment in manufacturing should increase as a share of all manufacturing as printing and publishing continues to increase its share of all manufacturing employment--printing and publishing is more office-related than food processing, for example.

JPB 09.11.86

TABLE 9: CHANGES IN EMPLOYMENT IN PRIVATE OFFICE SPACE IN THE CITY OF BOSTON, BY INDUSTRY, 1976-1985 AND PROJECTIONS 1985-2000

	CHANGE IN EMPLOYMENT IN THOUSANDS									
	1976-1985		1985-1990		1990-1995		1995-2000		1985-2000	
INDUSTRY	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Agri/Mining	0.0	23	0.0	9	0.0	0	0.0	0	0.0	10
Construction	0.0	(2)	0.2	9	0.2	12	0.0	2	0.4	25
Manufacturing	0.2	3	0.3	6	0.3	5	0.3	5	0.9	17
Transportation/Pub.Util.	0.9	7	0.4	3	1.4	10	1.0	7	2.8	21
Wholesale Trade	-0.3	(17)	0.0	1	0.0	0	0.0	0	0.0	2
Retail Trade	0.3	10	0.2	6	0.1	4	0.1	3	0.5	14
Finance/Ins./Real Estate	16.4	37	9.2	15	6.9	10	6.8	9	22.8	38
Services	27.4	45	22.2	25	18.4	17	28.4	22	69.1	79
Business	13.3	55	10.9	29	11.2	23	11.8	20	33.9	91
Professional	12.5	62	8.1	25	8.3	20	8.8	18	25.1	77
Other Services	1.6	10	3.3	19	-1.1	(5)	7.8	40	10.0	57
Government	-1.6	(10)	0.9	7	1.3	9	1.3	8	3.5	25
Total Employment	43.3	30	33.4	18	28.7	13	37.9	15	100.1	53

Sources: See Table 8.

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TABLE 10: COMPOSITION OF EMPLOYMENT IN PRIVATE OFFICE SPACE IN THE CITY OF BOSTON, BY INDUSTRY, 1976, 1985 AND PROJECTIONS TO 1990, 1995 AND 2000

	EMPLOYMENT IN PERCENT				
INDUSTRY	1976	1985	1990	1995	2000
Agri/Mining	0.1	0.1	0.1	0.1	0.1
Construction	1.2	0.9	0.9	0.8	0.7
Manufacturing	3.7	2.9	2.6	2.5	2.2
Transportation/Pub.Util.	8.7	7.1	6.2	6.1	5.6
Wholesale Trade	1.1	0.7	0.6	0.5	0.5
Retail Trade	2.0	1.7	1.5	1.4	1.3
Finance/Ins./Real Estate	30.5	32.2	31.5	30.6	28.9
Services	41.7	46.7	49.7	51.3	54.4
Business	16.6	19.9	21.8	23.8	24.7
Professional	14.0	17.4	18.4	19.6	20.1
Personal & Repair	11.1	9.4	9.5	7.9	9.6
Government	11.0	7.7	6.9	6.7	6.2
Total Employment	100.0	100.0	100.0	100.0	100.0

Sources: See Table 8.

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TABLE 11: Office Employment in Boston and the Metro Region, 1976-1985 and Projections to 2000

	1976	1985	2000
City of Boston /1			
Total Employment	511,200	593,700	746,100
Office Employment	144,400	187,700	287,800
% of Total	28	32	39
Boston Suburbs /2			
Total Employment	1,206,680	1,704,770	2,308,080
Office Employment	152,120	252,620	390,120
% of Total	13	15	17
Boston Metro Region /3			
Total Employment	1,717,880	2,298,470	3,054,180
Office Employment	296,520	440,320	677,920
% of Total	17	19	22
Boston Percent of Metro Area			
Total Employment	30	26	24
Office Employment	49	43	42
Suburban Percent of Metro Area			
Total Employment	70	74	76
Office Employment	51	57	58

Sources: 1/ U.S. Department of Commerce, Bureau of Economic Analysis; National Planning Association; Mass. Division of Employment Security; Boston Redevelopment Authority. Office employment is based on Table 8a.
2/ Difference between City of Boston and Boston Metro Region.
3/ National Planning Association; Office employment is based on Table 14.

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TABLE 12: Office Employment in Boston and the Metro Region, 1976-1985 and Projections to 2000

	CHANGE			
	1976-1985		1985-2000	
	Number	Percent	Number	Percent
City of Boston				
Total Employment	82,500	16	152,400	26
Office Employment	43,300	30	100,100	53
% of Total	52		66	
Boston Suburbs				
Total Employment	498,090	41	603,310	35
Office Employment	100,500	66	137,500	54
% of Total	20		23	
Boston Metro Region				
Total Employment	580,590	34	755,710	33
Office Employment	143,800	48	237,600	54
% of Total	25		31	
Boston Percent of Metro Area				
Total Employment	14		20	
Office Employment	30		42	
Suburban Percent of Metro Area				
Total Employment	86		80	
Office Employment	70		58	

Sources: U.S. Department of Commerce, Bureau of Economic Analysis; National Planning Association; Mass. Division of Employment Security; Boston Redevelopment Authority.

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TABLE 13: Office Employment in Boston and the Metro Region, 1976-1985 and Projections to 2000

	ANNUAL AVERAGE CHANGE			
	1976-1985		1985-2000	
	Number	Rate	Number	Rate
City of Boston				
Total Employment	9,167	1.7%	10,160	1.5%
Office Employment	4,811	3.0%	6,673	2.9%
% of Total	52		66	
Boston Suburbs				
Total Employment	55,343	3.9%	40,221	2.0%
Office Employment	11,167	5.8%	9,167	2.9%
% of Total	20		23	
Boston Metro Region				
Total Employment	64,510	3.3%	50,381	1.9%
Office Employment	15,978	4.5%	15,840	2.9%
% of Total	25		31	
Boston Percent of Metro Area				
Total Employment	14		20	
Office Employment	30		42	
Suburban Percent of Metro Area				
Total Employment	86		80	
Office Employment	70		58	

Sources: U.S. Department of Commerce, Bureau of Economic Analysis; National Planning Association; Mass. Division of Employment Security; Boston Redevelopment Authority.

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September 12, 1986

TABLE 14: OFFICE EMPLOYMENT FACTORS IN THE BOSTON METROPOLITAN AREA, BY INDUSTRY, 1976, 1985 AND PROJECTIONS TO 2000

INDUSTRY	FRACTION OF ALL EMPLOYEES IN OFFICE SPACE 1976	1985	2000
Agri/Mining	0.06	0.08	0.09
Construction	0.10	0.11	0.12
Manufacturing	0.05	0.07	0.08
Transportation/Pub.Util.	0.30	0.32	0.34
Wholesale Trade	0.03	0.04	0.04
Retail Trade	0.03	0.04	0.04
Finance/Ins./Real Estate	0.60	0.62	0.64
Services	0.33	0.34	0.35
Government	0.12	0.11	0.12
Proprietors	0.10	0.10	0.10

Source: These factors are based on the Boston factors in Tables 3a and 8a. The Metro Area factors are assumed to be slightly lower than the Boston factors due to differences in mix of business types within industries and land use that favor production and distribution facilities in the suburbs. The Metro Area's factors are assumed to increase over time as suburban land use and mix of business types within industries gradually increase the ratios of office-based employment to all employment.

JPB 12.12.86